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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,235	09/24/2004	Gerard Eduard Rosmalen	NL 020290	1784

24737 7590 06/28/2006

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER

GUPTA, PARUL H

ART UNIT PAPER NUMBER

2627

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/509,235	Applicant(s) ROSMALEN, GERARD EDUARD	
	Examiner Parul Gupta	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. An amendment filed on 3/30/06 has been considered with the following results.

Response to Arguments

2. Applicant's arguments filed on 3/30/06 with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claim 1 is objected to because of the following informalities: minor typographical errors such as the repetition of the phrase "of said". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wakabayashi et al., US Patent 4,669,073 in view of Miyagi et al., US Patent 5,748,579.

Regarding claim 1, Wakabayashi et al. uses to teach an optical disc apparatus (figures 1-3) for recording and/or reproducing information, comprising: a supporting assembly (32); a spindle motor (30), associated with the supporting assembly, having a spindle with a spindle axis (portion above element 30) for rotating an optical disc supported by the spindle about the spindle axis ("rotating means" of column 2, lines 42-45); and an optical lens unit (column 3, lines 35-58) associated with the supporting assembly for scanning an information surface of said optical disc, said optical lens unit

Art Unit: 2627

comprising: a focussing lens assembly with a focussing lens (38) having a focussing lens area bounded by a focussing lens periphery (36a, 36b, and 37) and a focussing axis intersecting said focussing lens area, said focussing lens assembly being adapted for focussing an optical beam on said information surface (column 2, lines 59-64); and a swing arm assembly (33 and 34) comprising a generally elongate swing arm structure supporting said focussing lens assembly (elements 40-43) at a free end, the swing arm assembly being rotatable about a swing axis (M) spaced from said free end and directed substantially perpendicularly to the swing arm structure and generally parallel to said spindle axis (portion above element 30), the swing arm assembly also comprising a movable magnetic focussing means (39) provided near said free end of the swing arm assembly for driving said focussing lens along said focussing axis so as to focus said optical beam on the optical disc information surface; the optical disc apparatus also comprising: a stationary magnetic focussing means ("focusing magnetic circuit" comprising 40a, 40b, 41a, 41b, and 42) associated with the supporting assembly for magnetically cooperating, through an intermediate air gap (44), with said movable focussing means ("focusing coil" 39) in order to generate a magnetic force vector having a vector component parallel to said focussing axis (M) so as to drive the focussing lens assembly along said focussing axis, wherein the stationary magnetic focusing means and the movable magnetic focussing means (39, 40a, 40b, 41a, 41b, and 42) are disposed and cooperate such that said force vector component intersects said focussing lens area. For further explanation, see corresponding descriptions in column

3, lines 32-58. Wakabayashi et al. does not teach the same placement of the focusing system in relation to the mirror as the applicant.

Miyagi et al. teaches in figure 1 the apparatus wherein the optical lens assembly comprises a perpendicularly-reflecting optical element (16) connected to the focusing lens (6), said perpendicularly-reflecting optical element having a reflective surface facing a side of the focusing lens situated away from the information surface of the optical disc (2), when supported by the spindle, and causing reflection of a laser beam traveling in a general direction between the swing axis and the focusing axis so as to travel through the focusing lens generally along the focusing axis, and wherein the movable magnetic focusing means (10) is connected to the perpendicularly-reflecting optical element in a position on a side of said of said perpendicularly-reflecting optical element opposite from said reflecting surface. Miyagi et al. also teaches the magnetic focusing means (10) operating with the driving coil (6) through the air gap (11).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include the concept of the focusing method connected to the perpendicularly-reflecting optical element in a position on a side opposite from said reflecting surface as taught by Miyagi et al. into the system of Wakabayashi et al. This would serve the purpose of preventing the leakage of the magnetic flux from the optical lens driving mechanism of the optical pickup and easily reducing size and thickness (column 2, lines 1-6 of Miyagi et al.).

Regarding claim 2, Wakabayashi et al. teaches the optical disc apparatus as claimed in claim 1, wherein said force vector component generally coincides with the focussing axis of said focussing lens. (As Wakabayashi has the same structure of magnets as the applicant, there must be a force vector component that similarly is perpendicular to the surface of the optical disk. As the applicant states in paragraph 0005, "Any magnetic force vector acting through the air gap on the focussing coil of the movable magnetic focussing means of the prior art arrangement described will exert on the focussing lens not only a force along the focussing axis, but also a perpendicular force." This means that a similar structure will inherently yield a similar result of a component that coincides with the focusing axis of the lens.)

Regarding claim 4, Wakabayashi et al. teaches the optical disc apparatus as claimed in claim 1, wherein the swing arm assembly is bounded by spaced virtual parallel flat planes (36a and 36b) extending perpendicularly to the swing axis, a first plane being nearer to the optical disc (36a), when supported by the spindle, and a second plane (36b) being more remote from said optical disc; at least a portion of the reflecting element (35) is inwardly spaced from said second plane thereby forming an intermediate space between the perpendicularly-reflecting optical element and said second plane; and the stationary magnetic focussing means extends into said intermediate space between the perpendicularly-reflecting optical element and said second plane, thus occupying at least a portion of said intermediate space. (Although the focusing coil of element 39 is what really occupies the intermediate space, it serves the same purpose as the stationary focusing means.)

Regarding claim 5, Wakabayashi et al. uses figure 1 to teach the optical disc apparatus as claimed in claim 2, wherein the movable magnetic focusing means (39) and the stationary magnetic focusing means (40a, 40b, 41a, 41b, and 42) cooperate through the intermediate air gap (44), said intermediate air gap being generally parallel to said reflecting surface of the perpendicularly-reflecting optical element.

Regarding claim 6, Wakabayashi et al. uses figure 1 to teach the optical disc apparatus as claimed in claim 1, wherein the stationary magnetic focussing means is configured as arcuate permanent magnetic circuit means (elements 40-42), and the movable magnetic focussing means (39) is configured as electrical magnetic coil means.

Regarding claim 8, Wakabayashi et al. teaches in column 3, lines 32-46 and figures 1 through 3 the optical disc apparatus as claimed in claim 1, wherein the swing arm structure comprises two spaced elongate generally parallel flat resilient arm elements (36a and 36b) extending between the swing axis and the focussing lens assembly (39, 40a, 40b, 41a, 41b, and 42), said arm elements being interconnected (via "attachment member" of element 37) at or near the free end of the swing arm assembly by the focussing lens assembly (39).

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wakabayashi et al in view of Ando, US Patent 4,984,225.

Wakabayashi et al. teaches the optical disc apparatus as claimed in claim 6, wherein the reflecting surface of the perpendicularly-reflecting optical element in the focussing lens assembly is disposed in an inclined plane relative to the swing axis of the

swing arm assembly (shown in figure 6 and explained in column 6, lines 3-5); said movable electrical magnetic coil means (element 39 of figure 1) is disposed parallel to the reflecting surface; and said stationary magnetic circuit means (elements 40-42 of figure 1) comprises a face directed towards said movable electrical magnetic coil means (element 39 of figure 1), such that the said intermediate air gap (element 44 of figure 1) between said movable electrical magnetic coil means and said stationary magnetic circuit means is disposed generally parallel to said reflective surface (element 35 of figure 1) of the perpendicularly-reflecting optical element in the focussing lens assembly. Wakabayashi et al. does not teach the inclined surface.

Ando teaches in figure 4 the apparatus wherein said movable electrical magnetic coil means (32) are disposed generally in an inclined plane; and said stationary magnetic circuit (30) means comprise an inclined face such that the said air gap between said movable electrical magnetic coil means and said stationary magnetic circuit means is disposed in an inclined plane.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have the magnetic coil and circuit to be on an inclined plane in order to be parallel to the reflecting surface. The benefits of having the magnetic coil and circuit be parallel to the reflecting surface are that it permits reduction of the size of the data retrieving system (column 3, lines 28-30 of Ando).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Parul Gupta whose telephone number is 571-272-5260. The examiner can normally be reached on Monday through Thursday, from 8:30 AM to 7 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PHG
6/20/06


THANG M. TRAN
PRIMARY EXAMINER